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1 Introduction: uses of the two hands in sign languages

One of the remarkable modality differences between spoken languages and signed languages is that the latter have two symmetrical articulators at their disposal, allowing for the simultaneous articulation of two words. Research in the last decade has shown that many if not all sign languages exploit this potential in many ways (Vermeerbergen, Leeson, & Crasborn, 2007). Lexical items in any sign language are either articulated with one or with two hands: this is something that is phonologically specified in their lexicons (Crasborn, 2011). As two-handed lexical items can also be hypo-articulated with one hand (“weak drop”; Van der Kooij, 2001), there are many opportunities in a sentence for using the second (non-dominant) hand for something else than realising the primary sequence of morphemes. In sign language poetry, this potential is occasionally exploited to realise two independent sentences at the same time: one with the left hand, and the other with the right hand (Crasborn, 2006 on a poem of Wim Emmerik, 1993). More commonly, the non-dominant hand articulates contrasting or backgrounded information in a more simple way.

One particular form of such articulations is illustrated in Figure 1. A sign is maintained by the left hand, while the right hand continues to

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'This man he remembers that somebody once said that ...'

Figure 1: Maintenance of a classifier on the non-dominant hand while the dominant hand continues to sign. Glosses below the images are the signs produced by the right hand, while the left hand produces the '1' classifier representing the man in the right hand sentence. [Corpus NGT, session 0318, 00:17, S016]

produce multiple signs in sequence. In this case, a classifier form representing a human referent is held on the left hand, while the right hand produces a sentence on what that referent thinks. Without presenting a specific syntactic or information-structural analysis of this (start of a) sentence, we can see that the left hand produces the background information about which the right hand provides new or additional information.

Such constructions had been discussed in the context of the use of classifiers (e.g. Emmorey, 2003). Liddell (2003) introduced a new perspective on these long perseverations (or 'holds') of signs by addressing their discourse properties. He coined the term 'buoy' for all holds of the non-dominant hand that are more than low-level phonetic phenomena related to the rhythm or prosody of the sentence, as they function as a landmark in the unfolding discourse much as buoys on the river guide the course of ships. Liddell (2003) and Liddell, Vogt-Svendsen, and Bergman (2007) distinguished different types of buoy, based on the sign that is held and on the precise discourse function of the construction. The present chapter will examine one of these buoys, the 'theme buoy', and investigate whether this buoy can be found in Sign Language of the Netherlands (NGT, Nederlandse Gebarentaal), a language that is mostly unrelated to the languages studied by Liddell and his colleagues (American, Norwegian, and Swedish Sign Language).

2 The theme buoy

The theme buoy looks much like the 1 classifier in Figure 1: it is an extended index finger roughly oriented vertically. Liddell et al. (2007, p. 208) state: "As with list buoys, the commonalities across the three signed languages with respect to the THEME buoy are striking. In each case the THEME buoy is produced with a 1 hand configuration with the index finger raised from horizontal as a discourse theme is being discussed". Its function is to highlight that "an important discourse theme is being discussed" (Liddell, 2003, p. 242). Norwegian signers "explain its meaning with expressions like 'it means that this is what the signer is talking about; that one must not forget', 'keep to it', 'this is the theme' and so on" (Liddell et al., 2007, p. 205). Kimmelman (2014, p. 39), looking at information

structure in Russian Sign Language and NGT, states: “Theme buoys [can be described] as expressing relevance of the information on the strong hand. It is, however, not exactly clear how the other kinds of buoys are related to [information structure]”. For theme buoys, by contrast, I will argue below that it is not yet clear what the *form* is.

From the examples in the works cited above from American and Norwegian sign language, it becomes clear that the theme buoy is less closely linked to the sentence(s) and their constituents produced by the dominant hand than in the case of the classifier (a fragment buoy) in Figure 1. The same would appear to hold for the other types of buoys (list buoys, point buoys and pointer buoys): they all have a more direct relation to referents or locations in the discourse. The theme buoy is realised during a single or multiple sentences, and sends out a independent parallel message: ‘What I am saying now with my dominant hand is important’.

3 Possible lexical sources of the theme buoy

Does the theme buoy exist in NGT? To be able to answer this question on the basis of corpus data, we must be able to establish how it is glossed. Liddell and his colleagues systematically talk about ‘THEME buoy’, the upper case of theme making clear that it is a gloss, as these are written in uppercase in the sign language literature. This in turn suggests that it is a lexical item that does not occur outside of this buoy function. In the annotation guidelines of the Corpus NGT (Crasborn, Bank, Zwitterlood, et al., 2015) and the lexicon used for annotating it (Crasborn, Bank, van der Kooij, et al., 2015), THEME is not distinguished as a form.

However, there are a number of signs that look remarkably like THEME in ASL and NSL. On a side note, it is interesting that although the sign is implicitly analysed as a lexical item in both languages, there is no discussion in Liddell et al. (2007) on why the sign might have not only the same function but also the same form in these two unrelated languages. Looking at the NGT lexicon, there are at least two signs that are similar in form to THEME (in addition to classifier forms as the one in Figure 1): BUT and PT:U, or upwards pointing of the index finger. They are illustrated in Figure 2.



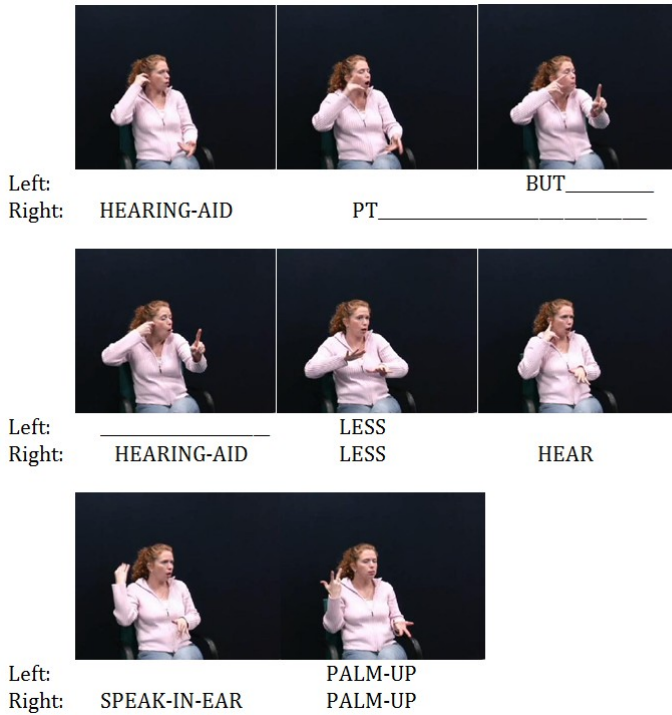
Figure 2: BUT and PT:U

In fact, in terms of their phonetic form, the two signs are often hard to distinguish. Their phonological analysis may reveal a small distinction, which I will discuss here. Both signs are highly frequent. Among the present 144,500 gloss annotations, BUT occurs 635 times and PT:U 195 times.¹ If we simply look at tokens that last for more than 1000 msec (or 25 video frames), reasoning that these long articulations are the most likely candidates for having a buoy-like function, we find 14 instances of BUT and 20 instances of PT:U.

Looking at those 14 instances of the sign BUT, we find that there is only one candidate for a theme buoy. Most other signs are conjunctions that are prolonged either while the speaker thinks, or at the start of a turn, to signal to the interlocutor that the signer wants to utter a contrasting opinion ('But, I don't agree'). The one candidate for a theme buoy function is presented in Figure 3.

One could argue that in this case the speaker highlights the importance of the hearing aid by at the same time signing BUT. The example is problematic in that the conjunction is used here in taking up a sentence

¹The total number of gloss annotations cannot be equated to lexical frequency, as two-handed lexical items receive two independent annotations when articulated by both the left and the right hand (i.e., not in weak-dropped form). Neither BUT nor PT:U occurs in two-handed form, so for these signs the counts can be considered to equal lexical frequency. All frequencies are approximate, as both corpus annotation and corrections are ongoing (Crasborn & de Meijer, 2012).



'With a hearing aid ... [interruption from interlocutor] But with a hearing aid you perceive speech less well.'

Figure 3: A sentence in which the sign BUT is held on the non-dominant hand while the other hand realises another sign. [Corpus NGT, session 1551, 00:49, S065]

that the signer had already started, and the perseveration of BUT stops after one other sign has been produced on the other hand in order to produce a two-handed sign. Does the BUT only function here to maintain the turn, countering a possible objection from the interlocutor? Or is it intentionally used to highlight importance of a specific constituent? Moreover, the fact that the perseveration stops as soon as the hand is necessary for the production of a two-handed sign (that could in principle also produced with one hand) calls into question whether the hold is in fact intentional or not.

Turning to the 20 relatively long instances of PT:U, we see a more mixed picture. Where the signs glossed BUT generally seemed to function primarily as a conjunction expressing contrast, the gloss PT:O appears to have been used for a mixed bag of signs. In three cases, the sign is actually pointing upwards to a high location, including an upward movement with the fingertip facing the end of the movement. Three (identical) cases include another type of pointing, towards a reference point for a circular movement by the other hand. Leaving an error and four ambiguous cases aside, this leaves nine signs that are in form more or less identical to BUT. The orientation of the finger is roughly vertical with the palm pointing forwards, and there is typically no movement at all. The sign is used both in a string of signs on the dominant hand and in simultaneous constructions. The latter is the case for four tokens. An example is presented in Figure 4.

In this example, the sign is glossed BUT as it has the same form. It would not appear to function as a conjunction here, nor is the contrastive meaning inherent in ‘but’ present. However, its use to highlight information as important is similar across all nine examples, and a variety of translations comes to mind in different examples: ‘aha’, ‘watch this’, ‘mind you’, ‘idea’, and ‘but’.

4 Conclusion

We have found initial evidence of the use of the sign BUT as a theme buoy in NGT, based on corpus data. While the function of the theme buoy is intuitively clear, the form of the theme buoy in relation to other signs



'Now sometimes it's practice to ... When a couple wants IVF or something like that, I find that interesting.'

Figure 4: Example of (a sign that looks like) BUT that is held while multiple signs are produced by the other hand. [Corpus NGT, session CNGT0256, 08:13, S014]

clearly merits more investigation. For NGT, it is plausible that it is the sign BUT, a conjunction that is used frequently in the language. In fact, many sign languages have a word that is glossed as ‘but’ in English, according to one website.² The forms of these signs, however, are not all like the theme buoy described by Liddell and colleagues and shown above in Figures 3 and 4. It could therefore also be the case that the NGT sign BUT is homonymous with a dedicated ‘theme buoy’ sign. Its similarity across ASL, NGT, and other languages may be rooted in an attention getting or turn attracting gesture that is used in many hearing cultures. On the other hand, it is also clear that ‘but’ is one of the possible translation equivalents of the sign when it is used as a theme buoy.

The few examples cited in the literature for ASL and the initial inspection of NGT data here make clear that more work is needed on this phenomenon: to better analyse its function in terms of discourse-analytical theory, but also to establish its form and its relation to other highly similar signs. Moreover, the varied use of the gloss PT:U calls for a better description of this upward pointing sign in the NGT lexicon and for clear annotation guidelines in order to avoid confusion of pointing signs with other signs that are phonetically similar.

References

- Crasborn, O. (2006). On the use of the two hands in sign language poetry. *Linguistics in the Netherlands*, 23, 65–77.
- Crasborn, O. (2011). The other hand in sign language phonology. In M. van Oostendorp, C. Ewen, E. V. Hume, & K. Rice (Eds.), *Companion to phonology* (Vol. 1, pp. 223–240). Blackwell.
- Crasborn, O., Bank, R., van der Kooij, E., Zwitserlood, I., Schüller, A., Ros, J., . . . Vonk, M. (2015). *NGT Signbank*. <http://signbank.science.ru.nl>, Nijmegen.

²See e.g. <http://www.spreadthesign.com> for examples from various sign languages in the world.

- Crasborn, O., Bank, R., Zwitserlood, I., van der Kooij, E., de Meijer, A., & Sáfár, A. (2015). *Annotation guidelines for the Corpus NGT. Version 3*. Ms., Radboud University, Nijmegen.
- Crasborn, O. & de Meijer, A. (2012). From corpus to lexicon: The creation of ID-glosses for the Corpus NGT. In O. Crasborn, E. Efthimiou, E. Fotinea, T. Hanke, J. H. Kristoffersen, & J. Mesch (Eds.), *5th workshop on the representation and processing of sign languages: Interactions between corpus and lexicon* (pp. 13–17). Paris: ELRA.
- Emmerik, W. (1993). *Poëzie in gebarentaal*. Amsterdam: Het complex.
- Emmorey, K. (2003). *Perspectives on classifier constructions in sign languages*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Kimmelman, V. (2014). *Information structure in Russian Sign Language and Sign Language of the Netherlands* (Doctoral dissertation, University of Amsterdam).
- van der Kooij, E. (2001). Weak drop in Sign Language of the Netherlands. In V. L. Dively, M. Metzger, S. Taub, & A. M. Baer (Eds.), *Signed languages. Discoveries from international research* (pp. 27–42). Washington D.C.: Gallaudet University Press.
- Liddell, S. (2003). *Grammar, gesture and meaning in American Sign Language*. Cambridge: Cambridge University Press.
- Liddell, S., Vogt-Svendsen, M., & Bergman, B. (2007). A crosslinguistic comparison of buoys: Evidence from American, Norwegian, and Swedish Sign Language. In M. Vermeerbergen, L. Leeson, & O. Crasborn (Eds.), *Simultaneity in signed languages* (pp. 187–216). Amsterdam/Philadelphia: John Benjamins.
- Vermeerbergen, M., Leeson, L., & Crasborn, O. (2007). *Simultaneity in signed languages: Form and function*. Amsterdam/Philadelphia: John Benjamins.

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